

## WE CLAIM:

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1. An improved thermostat and heat limitation arrangement for control of power to an electric hot water boiler, comprising a structure supporting a first and a second electric switch arranged to be interposed in series between a power supply and an electric heating element, an extended length first bimetal device being arranged for thermal at least indirect contact with water being heated and being supported by said structure, said  
10 extended length bimetal device comprising of a first pair of components made of materials being greatly different in the coefficient of linear thermal expansion, at least one of said components being tubular and the remaining component projecting into said structure to open said first switch when said first bimetal device reaches a first desired  
15 temperature, the improvement comprising the addition inside said first bimetal device of a second bimetal device comprising of a second pair of components made of materials being moderately different in their coefficient of linear thermal expansion, one of said second components also projecting into said structure to open said second switch if said second bimetal device reaches a second temperature higher than said first desired  
20 temperature due to failure of said first bimetal device to open said first electric switch.

2. The thermostat as claimed in claim 1, wherein said second switch when opened remains in the open state until a reset control is manually operated.

25 3. The thermostat as claimed in claim 1, wherein said extended length first bimetal device is composed of a brass outer tube and an invar central rod.

4. The thermostat as claimed in claim 1, wherein said second bimetal device comprises a first of said materials being a stainless steel and a second of said materials being invar  
30 steel.